

OBSERVATIONS AND SYSTEMATIC NOTES ON THE RED-CHEEKED PARROT

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SUMMARY

The Red-cheeked Parrot, *Geoffroyus geoffroyi* (Bechstein), was the subject of limited observations, during November, 1963, at Iron Range, North Queensland, and a brief account of this work is given. These observations have been coupled with a systematic examination of the subspecies described from this region.

The field behaviour observations on the Red-cheeked Parrot, *Geoffroyus geoffroyi* (Bechstein), as given below, were made during November, 1963, by the author, in company with Mr. K. J. Sellick, at Iron Range, North Queensland.

The boundaries of the range of this species in Australia are uncertain, but Thomson (1935) gives the area inhabited as the dense tropical jungles of the Hayes, Lockhart, Nesbit, and Rocky Rivers. Two males were collected by him on the Upper Lockhart River. McLennan (see Macgillivray, 1913) had previously collected specimens on the Pascoe River, while in 1948 Vernon (see Mack, 1953), when collecting for the Queensland Museum, obtained birds on the Peach River and at Iron Range on the Claudie River. The Red-cheeked Parrot appears to be restricted to that area on the east coast of Cape York Peninsula bounded by the Pascoe River in the north and the Rocky River in the south. It does not occur west of the dividing range. Within this restricted and somewhat specialised habitat Thomson (1935) recorded the species as numerous. The author found this to be so at Iron Range.

OBSERVATIONS

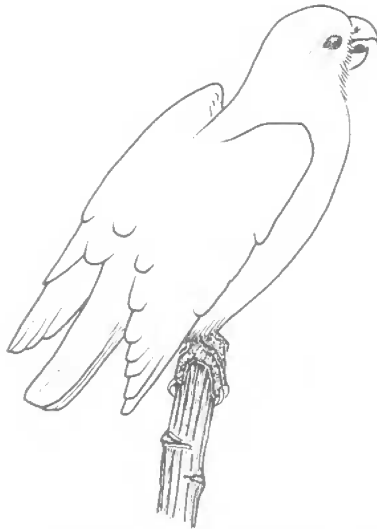
HABITAT

A detailed account of the Claudie River district, in which Iron Range is situated, has been given by Forshaw (1964). The particular area in which these observations were made is a reasonably large stand of rain forest bordering the Claudie River at a distance of approximately eight miles in a direct line from the east coast. The road from Iron Range airstrip to the jetty at Portland Roads also passes through the forest alongside the river. The predominant vegetation consists

of *Ficus* trees, many species of lianas such as *Entada scandens*, *Cedrella toona* trees, *Castanospermum australe*, and *Archontophoenix cunninghami*, a type of palm. Because of the dense canopy ground coverage is restricted, but the stinging trees, *Pipiturus argenteus* and *Laportea* spp., and the Bird Nest Fern, *Asplenium nidus*, are numerous in certain groves. The fruit or nuts borne by most of these plants are major factors in supporting the abundant avifauna.

DAILY MOVEMENTS

The Red-cheeked Parrots exhibited a definite pattern in their daily movements. Soon after sunrise they would make their way from roosting sites in the tall trees by the river to feeding areas, which seemed to be in the interior of the forest. En route many birds would alight on the very top of a leafless, uppermost branch of a tall tree by the roadside and call loudly for intervals of two minutes or so. The stance shown (text-fig. 1) would be adopted, and the wings vibrated in accompaniment to the call. Only twice were two or more birds seen calling from the top of the same tree, but frequently up to ten birds were calling from neighbouring trees. As far as could be ascertained the parrots selected the trees at random and did not appear to have any definite calling perches. It is also conceivable that each bird alighted and behaved in this manner at regular intervals during the flight to the feeding ground, but the limitation of time and the almost impenetrable nature of the jungle prevented the establishment of this.



Text-figure 1.—Calling stance of the Red-cheeked Parrot.

The passage to the feeding areas was over by mid-morning and only odd individuals were observed flying overhead during the remainder of the day. The return to the roosting trees was undertaken towards dusk. The singular behaviour

depicted in text-figure 1 was not observed during the return flight. While on the wing the distinctive call was emitted continuously, and this facilitated observations on movements.

FLIGHT

Earlier observers have remarked that the flight of *G. geoffroyi* is unlike that of other Australian psittacines. This is so and indeed it resembles the flight of the introduced Starling, *Sturnus vulgaris*. It is swift, direct, and without undulation, being undertaken with short, rapid wing-beats. There is no gliding even when alighting. The fully extended wing is kept rigid when moved and there is no bending at the shoulder.

VOICE

Only two calls were heard and these differed but slightly. A sharp, metallic note resembling the word "hang" repeated up to ten or more times in quick succession was the usual call. This was emitted when on the wing or when perched as depicted in text-figure 1. Imitation of the call was easy and the birds responded well. A double note resembling the above, but with a slightly alternating pitch, was given by two birds returning to roost at dusk. Feeding appeared to be undertaken in silence.

FEEDING

McLennan (see Macgillivray, 1913) gave the crop and stomach contents of the first specimens as partly digested seeds, small grains of blackish gum, and yellow seeds and beans. Recent microscopic examination of the same samples by the author at the American Museum of Natural History revealed small elongated seeds, small whole kernels from native fruits, small pieces of vegetable matter with fungi attached, blackish material which may have been gum as identified above, and partly digested yellow nut or fruit matter. These crop samples, being one of the few food records for this species in Australia, are very important. The specimens collected by the author were for myological studies, and dissection was, therefore, not possible.

Feeding was observed only once, when a small flock of parrots was located midst the dense foliage near the top of a very tall tree. Unfortunately, because of the inaccessibility of this tree it could not be positively identified, but when one of the birds was taken it had adhering to its bill a quantity of fresh pinkish-red succulent fruit with many small black seeds.

ASSOCIATIONS

G. geoffroyi was never seen to associate with the Rainbow Lorikeet, *Trichoglossus haematodus*, which was observed feeding in nearly all fruit-bearing trees in the area. Contact with the Fig Parrot, *Opopsitta diophthalma*, was also

anticipated because of alleged similar feeding habits, but this was not seen. A male *O. diophthalma* was found feeding in a *Bletharocarya involucrigera* tree together with three Rainbow Lorikeets. This isolationism shown by the Red-cheeked Parrot is noteworthy and could help to explain why it escaped detection until 1913.

BREEDING AND IMMATURE PLUMAGE

Nesting was not observed. From the many immature birds found associating with adult pairs to form family parties, it is strongly suggested that McLennan's nest (see Cayley, 1931) found in December, 1920 represented an unusual late breeding or that the young from one season remain with their parents right up to nesting in the next year.

If the latter is true the immature male collected on 4th November, 1963 (University of New England Collection) furnishes some scant information on plumage changes. This bird, which would have been at least nine months old, had the head olive-green with brownish markings, and the upper mandible brown, thus suggesting that the adult colours do not commence to show until at least the second year. An examination of skins at the American Museum of Natural History failed to establish this for the species as a whole, but did indicate that males of the race *floresianus* from Lombok Island do take more than one year to attain adult plumage. Two specimens were collected in June, 1896. AMNH.620563 has the head green with some brown markings, and the upper mandible brown, while AMNH.620567 has a brown head with some blue on the nape, some red on the cheeks, and the upper mandible red. Unless a remarkable individual variation exists in immatures, it seems that these birds were at least a season apart in age. This collection also showed that young males assumed the brown head of the adult female before attaining the red and blue. That this pattern exists in the Cape York population can only be assumed.

The presence of many immature birds at Iron Range suggested that the unique behaviour depicted in text-figure 1 could have been that of young soliciting parental feeding. If this were so, it seems strange, when the action was observed many times every morning, that no response by an adult was seen.

SYSTEMATIC DISCUSSION

The Red-cheeked Parrot of Cape York Peninsula was described as *Pseudopsittacus maclennani* by Macgillivray (1913) and was later made a subspecies of *Geoffroyus geoffroyi* (Bechstein) by Mathews (1913), who subsequently (1917) stated that it differed from *G. g. aruensis* (Gray, 1858) in being paler blue on the underwing coverts. Cayley (1938) remarked that the Australian bird also seemed larger than any he had examined from New Guinea.

The subspecies of *G. geoffroyi* may be divided into two distinct groups: those races in which the rump and back are green, and those in which these parts are marked with rusty red. With the exception of *aruensis* (Aru Islands and southern New Guinea), *maclennani* (Cape York), and also *floresianus* and *tjindanae* from the Lesser Sundas, the races of the first group are well-defined. The discussion which follows is restricted to the first two forms named, but my work suggests that the Lesser Sundas populations also require critical examination.

The comparative study of *maclennani* and *aruensis* has been greatly handicapped by the lack of adequate material from Cape York. Only five adult specimens of the former, three in Australian museums and two in New York, were available for examination. Immature specimens were not considered.

(a) SIZE: For *maclennani* the wing length of three adult males, including the type, is 150.5–157.7 mm (153.9 mm), and of two adult females is 153.1–153.2 mm (153.1 mm), as against 151.8–165.7 mm (158.3 mm) for ten males and 144.5–161.6 mm (150.8 mm) for ten females of *aruensis*. The measurements of the specimens of *maclennani* fall within the range of variation of *aruensis*, and, though it would be desirable to compare more measurements, it seems doubtful that any appreciable difference in size exists.

(b) PLUMAGE: The differences in the colouration of the two forms are not constant in any character, although, generally speaking, male *maclennani* differ from male *aruensis* in having the underwing-coverts paler, brighter blue, the underparts duller green without any yellowish markings, differences that are also found in the females, and the face darker and more uniformly red. It should be emphasised, however, that all these differences are very slight and, as stated above, are not completely constant. For instance a male of *aruensis* from Samarai, New Guinea (AMNH.266953) is indistinguishable from the specimens of *maclennani* in the colour of the underparts, while in another from Dobo, Aru Islands (AMNH.620733) the colour of the underwing coverts is very similar, and a third from Trangan, Aru Islands (AMNH.620735) is identical in the colouration of the face. A female of *aruensis* from the Oetakwa River, New Guinea (AMNH.620739) resembles the females of *maclennani* in the colour of the underparts.

The above indicates that it is very desirable to compare a much larger series of *maclennani* with *aruensis*, but the apparent lack of an appreciable difference in size, together with the fact that any existing plumage differences are very slight and not completely constant in the material so far examined, suggests that it is best to synonymize *maclennani* with *aruensis* for the present.

CONCLUSION

These brief field observations carried out on the Red-cheeked Parrot have revealed some very interesting behaviour, but have also demonstrated the need for further ethological study. Despite the inadequacy of material from Cape York, comparisons have indicated that for the present it seems best to synonymize *G. g. maclennani* from this area with *G. g. aruensis* from the New Guinea region.

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Mr. L. S. Hall of Canberra made the line drawing.

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LITERATURE CITED

- Cayley, N. W., 1931. *What Bird is That ?*, 2nd edition. Sydney.
- , 1938. *Australian Parrots*. Sydney.
- Forshaw, J. M., 1964. Some field observations on the Great Palm Cockatoo. *Emu*, 64, pp. 327-331.
- Gray, G. R., 1858. A list of the birds, with descriptions of new species obtained by Mr. Alfred R. Wallace in the Aru and Ké Islands. *Proc. Zool. Soc. London*, 26, pp. 169-198.
- Macgillivray, W., 1913. Description of new parrot. *Emu*, 13, pp. 105-106.
- Mack, G., 1953. Birds from Cape York Peninsula, Queensland. *Mem. Qd Mus.*, 13, pp. 1-39.
- Mathews, G. M., 1913. *A list of the Birds of Australia*. London.
- , 1917. *The Birds of Australia*, vol. VI. London.
- Thomson, D. F., 1935. *Birds of Cape York Peninsula*. Melbourne.